Docket No. 071671-0168

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Toshiyuki SASHIHARA
Title:	SYSTEM AND METHOD FOR INFORMING THAT USER IS IN OR NOT IN WIRELESS LAN SERVICE
Appl. No.:	10/644,857
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Examiner:	Wu, Jianye
Art Unit:	2462
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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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Commissioner for Patents
PO Box 1450
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Sir:

The following is the Appellant's Appeal Brief under the provisions of 37 C.F.R. 41.37. This Appeal Brief is being filed together with a credit card payment form in the amount of $540.00 covering the 37 C.F.R. 41.20(b)(2) appeal fee. If this fee is deemed to be insufficient, authorization is hereby given to charge any deficiency (or credit any balance) to the undersigned deposit account 19-0741. A notice of appeal was previously filed on September 8, 2010.

1. Real Party in Interest

The real party in interest is NEC Corporation, the assignee of this application.

2. Evidence Appendix

There are no related evidence that will directly affect, be directly affected by or have a bearing on the present appeal, that are known to appellant, the assignee, or the appellant's patent representative. The Evidence Appendix (Section 10), attached hereto, states "None".

3. Related Appeals and Interferences

There are no related appeals or interferences that will directly affect, be directly affected by or have a bearing on the present appeal, that are known to the Appellant, the Assignee, or the Appellant's patent representative. The Related Proceedings Appendix (Section 11), attached hereto, states "None".

4. Status of Claims

The present appeal is directed to claims 1, 2, 4-12, 14-17 and 19-21. A copy of the presently pending claims under rejection are attached herein in the Claims Appendix (Section 12). Claims 3, 13 and 18 were previously canceled, and thus are not on appeal.

5. Status of Amendments

No amendments are being filed concurrently with this Appeal Brief.

6. Summary of the Claimed Subject Matter

The present invention is directed to a system/method for informing that the user is in or not in wireless LAN service area. As described on page 3 of the specification:

> Where ESS ID is given for identifying the hot spot dealer, using the above indicator the user can not check whether the user is in the service area of a hot spot dealer in roaming contract relation to the own subscribed hot spot dealer, but can check only whether the user is in the service area of the own hot spot dealer.
>
> Also, where the hot spot dealer in the roaming contract relation uses the same ESS ID, the user cannot distinguish whether the user is in the area of the own subscribed dealer or in the area of the roaming contract relation dealer.

The present invention overcomes the above problems by "providing a display, which permits clear distinguish as to whether the user is in the area of the own subscribed dealer or in the area of the roaming contract relation dealer instead of providing display of the two cases in the same fashion." (see page 4 of the specification).

In more detail, independent claim 1 recites:

A system for informing that the user is in or not in wireless LAN service area comprising:

a preset data storing means for storing identification data of a hot spot dealer, to which the user is subscribed, and identification data of a hot spot dealer in roaming contract relation to the user's own subscribed hot spot dealer, the identification data of the hot spot dealer to which the user is subscribed corresponding to an identification code that is unique to the hot spot dealer to which the user is subscribed and is the same for all other users who are subscribed to the hot spot dealer and does not include any data unique to the user or any of the other users;

a wireless communication means that includes a display means; and

a means functioning:

when providing a display as to whether the user is in the service area of a hot spot service, to obtain, via the wireless communication means, the electric field intensity of a channel as a subject of survey and identification data of a dealer, which is transmitted on the channel, and check whether the obtained identification data is identical with identification

data of the user's own subscribed hot spot dealer, which is stored in the preset data storing means;

when the obtained identification data is identical with the identification data of the user's own subscribed hot spot dealer, to output data for display on the display means to enable the user to determine that the obtained electric field intensity is that of the user's own subscribed hot spot dealer and not that of the roaming contract relation dealer; and

when the obtained identification data is identical with the identification data of the roaming contract relation dealer, to output data for display on the display means to enable the user to determine that the obtained electric field intensity is that of the roaming contract relation dealer and not that of the user's own subscribed hot spot dealer.

Support for "*A system for informing that the user is in or not in wireless LAN service area*" may be found in Figure 1 of the drawings, and on pages 11-22 of the specification.

Support for "*a preset data storing means for storing identification data of a hot spot dealer, to which the user is subscribed, and identification data of a hot spot dealer in roaming contract relation to the user's own subscribed hot spot dealer, the identification data of the hot spot dealer to which the user is subscribed corresponding to an identification code that is unique to the hot spot dealer to which the user is subscribed and is the same for all other users who are subscribed to the hot spot dealer and does not include any data unique to the user or any of the other users*" may be found by way of element 108 in Figure 1 of the drawings, in steps 201 and 301 in Figures 2 and 3 of the drawings, and on pages 14 and 15 of the specification.

Support for "*a wireless communication means that includes a display means*" may be found in Figure 1 of the drawings, especially display means 105 and wireless communication means 107, and on page 14, lines 2-9 of the specification.

Support for "*a means functioning:*

when providing a display as to whether the user is in the service area of a hot spot service, to obtain, via the wireless communication means, the electric field intensity of a channel as a subject of survey and identification data of a dealer, which is transmitted on the channel, and check whether the obtained identification data is identical with identification data of the user's own subscribed hot spot dealer, which is stored in the preset data storing

means" may be found in steps 203, 204 in Figure 2 and steps 303 and 304 in Figure 3 of the drawings, and on pages 15 and 16 of the specification.

Support for "*when the obtained identification data is identical with the identification data of the user's own subscribed hot spot dealer, to output data for display on the display means to enable the user to determine that the obtained electric field intensity is that of the user's own subscribed hot spot dealer and not that of the roaming contract relation dealer*" may be found in step 205 of the drawings and on page 15 of the specification.

Support for "*when the obtained identification data is identical with the identification data of the roaming contract relation dealer, to output data for display on the display means to enable the user to determine that the obtained electric field intensity is that of the roaming contract relation dealer and not that of the user's own subscribed hot spot dealer*" may be found in step 305 of the drawings and on page 16 of the specification.

Independent claim 11 recites:

A method of informing that the user is in or not in a wireless LAN service area, in which:

identification data of the user's own subscribed hot spot dealer and identification data of a hot spot dealer in roaming contract relation to the own hot spot dealer are stored in a preset data storing means; and

the method comprising:

a step executed by a wireless communication means to obtain the electric field intensity of a channel as a subject of survey and identification data of a dealer, which is transmitted on the channel, and check whether the obtained identification data is the identification data of the user's own subscribed hot spot dealer as stored in preset data storing means;

a step of displaying on a display of the wireless communication means, when the obtained identification data is identical with the user's own subscribed hot spot dealer, that the obtained electric field intensity is that of the user's own subscribed hot spot dealer and not that of the roaming contract relation dealer to enable the user to view the displayed content at a glance;

a step of making a check, when the obtained identification data fails to be identical with the identification data of the user's own subscribed hot spot dealer, as to whether the obtained data is identical with the identification data of the roaming contract relation dealer; and

a step of displaying on the display of the wireless communication means, when the obtained identification data is identical with the identification data of the roaming contract relation dealer, that the obtained electric field intensity is that of the roaming contract relation dealer and not that of the user's own subscribed hot spot dealer to enable the user to view the displayed content at a glance,

wherein the identification data of the hot spot dealer to which the user is subscribed corresponds to an identification code that is unique to the hot spot dealer to which the user is subscribed and is the same for all other users who are subscribed to the hot spot dealer and does not include any data unique to the user or any of the other users.

Support for "*A method of informing that the user is in or not in a wireless LAN service area*" may be found in Figures 2 and 3 of the drawings, and on pages 11-22 of the specification.

Support for "*identification data of the user's own subscribed hot spot dealer and identification data of a hot spot dealer in roaming contract relation to the own hot spot dealer are stored in a preset data storing means*" may be found by way of element 108 in Figure 1 of the drawings, in steps 201 and 301 in Figures 2 and 3 of the drawings, and on pages 14 and 15 of the specification.

Support for "*a step executed by a wireless communication means to obtain the electric field intensity of a channel as a subject of survey and identification data of a dealer, which is transmitted on the channel, and check whether the obtained identification data is the identification data of the user's own subscribed hot spot dealer as stored in preset data storing means*" may be found in steps 203 and 204 in Figure 2 and in steps 303 and 304 in Figure 3 of the drawings, and on pages 14 and 15 of the specification.

Support for "*a step of displaying on a display of the wireless communication means, when the obtained identification data is identical with the user's own subscribed hot spot dealer, that the obtained electric field intensity is that of the user's own subscribed hot spot*

dealer and not that of the roaming contract relation dealer to enable the user to view the displayed content at a glance" may be found in steps 204 and 205 in Figure 2 of the drawings, and in display means 105 in Figure 1 of the drawings, and on pages 15 and 16 of the specification.

Support for "*a step of making a check, when the obtained identification data fails to be identical with the identification data of the user's own subscribed hot spot dealer, as to whether the obtained data is identical with the identification data of the roaming contract relation dealer"* may be found in step 304 in Figure 3 of the drawings, and on pages 15 and 16 of the specification.

Support for "*a step of displaying on the display of the wireless communication means, when the obtained identification data is identical with the identification data of the roaming contract relation dealer, that the obtained electric field intensity is that of the roaming contract relation dealer and not that of the user's own subscribed hot spot dealer to enable the user to view the displayed content at a glance"* may be found in step 305 in Figure 3 of the drawings, and on pages 15 and 16 of the specification.

Support for "*wherein the identification data of the hot spot dealer to which the user is subscribed corresponds to an identification code that is unique to the hot spot dealer to which the user is subscribed and is the same for all other users who are subscribed to the hot spot dealer and does not include any data unique to the user or any of the other users*" may be found on pages 13-15 of the specification.

Dependent claim 2 recites:

wherein the display means includes:

a light-emitting means; and

a control means for causing the light-emitting means to emit informing light in a first color in the case when the user is in the service area of the user's own subscribed hot spot dealer and in a second color different from the first color in the case when the user is in the service area of the dealer in roaming contract relation to the own hot spot dealer.

Support for "*a light-emitting means"* may be found on page 14, lines 17-19 of the specification.

Support for "*a control means for causing the light-emitting means to emit informing light in a first color in the case when the user is in the service area of the user's own subscribed hot spot dealer and in a second color different from the first color in the case when the user is in the service area of the dealer in roaming contract relation to the own hot spot dealer*" may be found on page 18, lines 1-6 of the specification.

Dependent claim 12 recites:

wherein the light-emitting means in the display means is controlled to emit informing light in a first color in the case of displaying that the user is in the service area of the user's own subscribed hot spot dealer and in a second color different from the first color in the case of displaying that the user is in the service area of a hot spot dealer in roaming contract relation to the own hot spot dealer.

Support for "*wherein the light-emitting means in the display means is controlled to emit informing light in a first color in the case of displaying that the user is in the service area of the user's own subscribed hot spot dealer and in a second color different from the first color in the case of displaying that the user is in the service area of a hot spot dealer in roaming contract relation to the own hot spot dealer*" may be found on page 14, lines 17-19 and on page 18, lines 1-6 of the specification.

7. Ground of Rejection to be Reviewed on Appeal

The grounds of rejection to be reviewed on appeal are: a) whether the examiner erred in rejecting claims 1, 2, 4-12, 14-17 and 19-21 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2003/0065805 to Barnes, Jr. ("Barnes") in view of U.S. Patent Publication No. 2003/0152075 to Hawthorne et al. ("Hawthorne") and further in view of U.S. Patent Publication No. 2002/0061745 to Ahn ("Ahn"); b) whether the examiner erred in rejecting claims 4, 6 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Barnes in view of Hawthorne and Ahn, and further in view of U.S. Patent Publication No. 2003/0156542 to Connor ("Connor"); c) whether the examiner erred in rejecting claims 5 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Barnes in view of Hawthorne and Ahn, and further in view of U.S. Patent Publication No. 2002/0058530 to Akama ("Akama"); d) whether the examiner erred in rejecting claims 7 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Barnes in view of Hawthorne and Ahn, and further in view of Jim Geier, "Overview of the IEEE 802.11 Standard" ("Geier article"); and e) whether the examiner erred in rejecting claims 19-21 under 35 U.S.C. § 103(a) as being unpatentable over Barnes in view of Hawthorne, Ahn and Connor, and further in view of the Geier article and U.S. Patent No. 6,505,114 to Luciani ("Luciani").

8. Argument

i) Independent claims 1 and 11:

Independent claim 1 recites:

A system for informing that the user is in or not in wireless LAN service area comprising:

a preset data storing means for storing identification data of a hot spot dealer, to which the user is subscribed, and identification data of a hot spot dealer in roaming contract relation to the user's own subscribed hot spot dealer, the identification data of the hot spot dealer to which the user is subscribed corresponding to an identification code that is unique to the hot spot dealer to which the user is subscribed and is the same for all other users who are subscribed to the hot spot dealer and does not include any data unique to the user or any of the other users;

a wireless communication means that includes a display means; and

a means functioning:

when providing a display as to whether the user is in the service area of a hot spot service, to obtain, via the wireless communication means, the electric field intensity of a channel as a subject of survey and identification data of a dealer, which is transmitted on the channel, and check whether the obtained identification data is identical with identification data of the user's own subscribed hot spot dealer, which is stored in the preset data storing means;

when the obtained identification data is identical with the identification data of the user's own subscribed hot spot dealer, to output data for display on the display means to enable the user to determine that the obtained electric field intensity is that of the user's own subscribed hot spot dealer and not that of the roaming contract relation dealer; and

when the obtained identification data is identical with the identification data of the roaming contract relation dealer, to output data for display on the display means to enable the user to determine that the obtained electric field intensity is that of the roaming contract relation dealer and not that of the user's own subscribed hot spot dealer.

Independent claim 11 recites similar features as method steps. The present invention as exemplified by independent claims 1 and 11 **distinguishably displays** the obtained electric field intensity as being that of the user's own subscribed hot spot dealer (and not that of the roaming contract relation dealer) or that of the roaming contract relation dealer (and not that of the user's own subscribed hot spot dealer).

For example, the Office Action dated June 9, 2010 cites paragraph 0032 of Barnes, but this paragraph merely describes that a communication link may be established by a device or a remote computer, and it says nothing about displaying an electric field intensity to a user as being that of the user's own subscribed hot spot dealer and not that of the roaming contract relation dealer.

Also, the Office Action dated June 9, 2010 cites paragraph 0045 of Barnes, but that paragraph describes the displaying of **television signals to a user**, which clearly are not electric field intensities displayed to a user as being that of the roaming contract relation dealer and not that of the user's own subscribed hot spot dealer.

On page 2 of the Office Action dated June 9, 2010, it asserts that the limitation "and not that of the roaming contract relation dealer" that was previously added to claims 1 and 11 does not change the scope of those claims, since "the user is in the user's own subscribed network when the received network ID is identical to [with] the network identification data of the user's own subscribed hot spot dealer ("when the obtained identification data is identical with the identification data of the user's own subscribed hot spot dealer" (see claim 1), therefore, not in a roaming network." This assertion misunderstands and misinterprets the particular claim features at issue here. Specifically, in the present claims, a display is provided to inform a user that an obtained electric field intensity is that of the user's own subscribed hot spot dealer and not that of the roaming contract relation dealer when there is an identification data match with the user's own subscribed hot spot dealer, and to inform the user (via the display) that an obtained electric field intensity is that of a roaming contract relation dealer and not that of the user's own subscribed hot spot dealer when there is an identification data match with the roaming contract relation dealer.

Barnes does not teach or suggest such features as explicitly recited in claims 1 and 11. Barnes says nothing about displaying an electric field intensity to a user as being that of the user's own subscribed hot spot dealer and not that of the roaming contract relation dealer. Rather, paragraphs 0110-0115 of Barnes deal with validation and authentication of a user, by confirming a user's identity. No information is provided to the user in the system of Barnes to tell that user whether or not he is in a subscribed hot spot dealer's network or a roaming contract relation dealer network; rather, information of a user of a device 101 is provided to another location (e.g., the third party computer system, as described in paragraph 0111 of Barnes) in order to authenticate or not authenticate that user.

Accordingly, since none of the other cited art of record rectifies these deficiencies of Barnes, independent claims 1 and 11, as well as dependent claims 2, 4-10, 12, 14-17 and 19-21 patentably distinguish over the cited art of record.

i) Dependent claims 2 and 12:

Dependent claims 2 and 12 additionally recite a control means/step for causing the light-emitting means to emit informing light in a first color in the case when the user is in the service area of the user's own subscribed hot spot dealer and in a second color different from the first color in the case when the user is in the service area of the dealer in roaming contract relation to the own hot spot dealer.

On pages 2 and 3 of the Office Action dated June 9, 2010, it asserts that "Barnes clearly discloses a color Display 175 of Fig. 1", and that "One with ordinary skill in the art would use a first color in the case when the user is in the service area of the user's own subscribed hot spot dealer and in a second color different from the first color in the case when the user is in the service area of the dealer in roaming contract relation to the own hot spot dealer in order to distinguish two different scenarios." The Office Action goes on to assert that Barnes color display 175 "suggests LED has different colors."

In reply, the fact that Barnes discloses a high resolution color display 175 in a portable device 101 that is used for providing location based functions and mobile e-commerce, falls well short of somehow coming up with the idea of using Barnes's high resolution color

display 175 for displaying one scenario in one color and for displaying another scenario in another color.

As such, since none of the other cited art of record rectifies these deficiencies of Barnes, dependent claims 2 and 12 are patentable over the cited art of record for these additional reasons, beyond the reasons given above for their respective independent claims 1 and 11.

9. Conclusion

In view of above, Appellant requests that the rejections of the claims be reversed.

Respectfully submitted,

Date 10/14/2010 By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 945-6014
Facsimile: (202) 672-5399

George C. Beck
Registration No. 38,072

Phillip J. Articola
Registration No. 38,819

10. EVIDENCE APPENDIX

None

11. RELATED PROCEEDINGS APPENDIX

None

12. CLAIMS APPENDIX

LIST OF THE CLAIMS ON APPEAL (WITH STATUS IDENTIFIERS)

1. A system for informing that the user is in or not in wireless LAN service area comprising:

a preset data storing means for storing identification data of a hot spot dealer, to which the user is subscribed, and identification data of a hot spot dealer in roaming contract relation to the user's own subscribed hot spot dealer, the identification data of the hot spot dealer to which the user is subscribed corresponding to an identification code that is unique to the hot spot dealer to which the user is subscribed and is the same for all other users who are subscribed to the hot spot dealer and does not include any data unique to the user or any of the other users;

a wireless communication means that includes a display means; and

a means functioning:

when providing a display as to whether the user is in the service area of a hot spot service, to obtain, via the wireless communication means, the electric field intensity of a channel as a subject of survey and identification data of a dealer, which is transmitted on the channel, and check whether the obtained identification data is identical with identification data of the user's own subscribed hot spot dealer, which is stored in the preset data storing means;

when the obtained identification data is identical with the identification data of the user's own subscribed hot spot dealer, to output data for display on the display means to enable the user to determine that the obtained electric field intensity is that of the user's own subscribed hot spot dealer and not that of the roaming contract relation dealer; and

when the obtained identification data is identical with the identification data of the roaming contract relation dealer, to output data for display on the display means to enable the user to determine that the obtained electric field intensity is that of the roaming contract relation dealer and not that of the user's own subscribed hot spot dealer.

2. The system for informing that the user is in or not in a wireless LAN service area according to claim 1, wherein the display means includes:

a light-emitting means; and

a control means for causing the light-emitting means to emit informing light in a first color in the case when the user is in the service area of the user's own subscribed hot spot dealer and in a second color different from the first color in the case when the user is in the service area of the dealer in roaming contract relation to the own hot spot dealer.

3. (Canceled).

4. The system for informing that the user is in or not in a wireless LAN service area according to claim 1_2 which further comprises a means for collecting data link layer level protocol data, obtaining the network congestion degree in the service area and outputting the obtained network congestion degree to the display means.

5. The system for informing that the user is in or not in a wireless LAN service area according to claim 1, wherein the display means includes:

a light-emitting means; and

a means functioning to control the display of the network congestion degree by controlling the flickering period of the light-emitting means based on the network congestion degree.

6. The system for informing that the user is in or not in a wireless LAN service area according to claim 4, wherein the display means includes:

a light-emitting means; and

a means functioning:

to have the light-emitting means to emit light in different colors in the case of displaying that the user is in the service areas of the user's own contracted hot spot dealer and in the case of displaying that the user is in the service area of a hot spot dealer in roaming contract relation to the own hot spot dealer; and

to display the network congestion degree by controlling the flickering cycle of the light-emitting means according to the network congestion degree.

7. The system for informing that the user is in or not in a wireless LAN service area according to claim 1, wherein wireless LAN ESS (extended service set) ID is used as identification data of the hot spot dealer.

8. The system for informing that the user is in or not in a wireless LAN service area according to claim 1,

which further comprises an agent authentication means set by the user's own subscribed hot spot dealer and a hot spot dealer in roaming contract relation to the own hot spot dealer; and

in which:

at the user side terminal data concerning the authentication means of the user's own subscribed hot spot dealer and a hot spot dealer in roaming contract relation to the own hot spot dealer and data necessary for these authentications are preliminarily stored in the memory means;

the agent authentication means carries out authentication by using the data preset by the user; and

when the agent authentication means has carried out authentication successfully, data indicative of that the pertinent service area is that of the successfully authenticated hot spot dealer is outputted to the display means for display.

9. The system for informing that the user is in or not in a wireless LAN service area according to claim 1, which further comprises a means for deciding, when a check is made as to whether the obtained identification data is identical with the identification data of the user's own subscribed hot spot dealer as stored in the preset data storing means, that the obtained identification data and the identification data stored in the preset data storing means are identical when the two data are not perfectly identical but partly identical.

10. A system for informing that the user is in or not in a wireless LAN service area according to claim 1, further comprising authentication means for performing an authentication of the user's own subscribed hot spot dealer or the roaming contract relation dealer, the authentication being performed using data preset by the user, whereby the

authentication means outputs an indication on the display of the display means as to whether or not the authentication was successful.

11. A method of informing that the user is in or not in a wireless LAN service area, in which:

identification data of the user's own subscribed hot spot dealer and identification data of a hot spot dealer in roaming contract relation to the own hot spot dealer are stored in a preset data storing means; and

the method comprising:

a step executed by a wireless communication means to obtain the electric field intensity of a channel as a subject of survey and identification data of a dealer, which is transmitted on the channel, and check whether the obtained identification data is the identification data of the user's own subscribed hot spot dealer as stored in preset data storing means;

a step of displaying on a display of the wireless communication means, when the obtained identification data is identical with the user's own subscribed hot spot dealer, that the obtained electric field intensity is that of the user's own subscribed hot spot dealer and not that of the roaming contract relation dealer to enable the user to view the displayed content at a glance;

a step of making a check, when the obtained identification data fails to be identical with the identification data of the user's own subscribed hot spot dealer, as to whether the obtained data is identical with the identification data of the roaming contract relation dealer; and

a step of displaying on the display of the wireless communication means, when the obtained identification data is identical with the identification data of the roaming contract relation dealer, that the obtained electric field intensity is that of the roaming contract relation dealer and not that of the user's own subscribed hot spot dealer to enable the user to view the displayed content at a glance,

wherein the identification data of the hot spot dealer to which the user is subscribed corresponds to an identification code that is unique to the hot spot dealer to which the user is

subscribed and is the same for all other users who are subscribed to the hot spot dealer and does not include any data unique to the user or any of the other users.

12. The method for informing that the user is in or not in a wireless LAN service area according to claim 11, wherein the light-emitting means in the display means is controlled to emit informing light in a first color in the case of displaying that the user is in the service area of the user's own subscribed hot spot dealer and in a second color different from the first color in the case of displaying that the user is in the service area of a hot spot dealer in roaming contract relation to the own hot spot dealer.

13. (Canceled).

14. The method for informing that the user is in or not in a wireless LAN service area according to claim 11, which comprises a step of collecting data link layer level protocol data, obtaining the network congestion degree of the service area and outputting the obtained network congestion degree to the display means.

15. The method for informing that the user is in or not in a wireless LAN service area according to claim 11, which comprises a step of displaying the network congestion degree by controlling the flickering cycle of the light-emitting means in the display means according to the network congestion degree.

16. The method for informing that the user is in or not in a wireless LAN service area according to claim 12, which comprises a step of collecting data link layer level protocol data, obtaining the network congestion degree of the service area and displaying the network congestion degree by controlling the flickering cycle of the light-emitting means based on the network congestion degree.

17. The method for informing that the user is in or not in a wireless LAN service area according to claim 11, wherein wireless LAN ESS (Extended Service Set) ID is used as the identification data of the hot spot dealer.

18. (Canceled).

19. The system according to claim 4, wherein the congestion degree is obtained by measuring reliability of reception of an acknowledged (ACK) frame that is transmitted by an access point, or by measuring frequency of reception of a Clear to Send (CTS) frame that is transmitted by the access point, and wherein the congestion degree is displayed on the display means having one of a plurality of colors for providing an indication of a level of congestion among a plurality of levels of congestion.

20. The method for informing that the user is in or not in a wireless LAN service area according to claim 11, wherein the congestion degree is obtained by measuring reliability of reception of an acknowledged (ACK) frame that is transmitted by an access point, or by measuring frequency of reception of a Clear to Send (CTS) frame that is transmitted by the access point, and wherein the congestion degree is displayed on the display having one of a plurality of colors for providing an indication of a level of congestion among a plurality of levels of congestion.

21. The system according to claim 4, wherein the system is a Carrier Sense Multiple Access System, and wherein the congestion degree is obtained by periodically measuring a carrier sense function, and wherein the congestion degree is displayed on the display means having one of a plurality of colors for providing an indication of a level of congestion among a plurality of levels of congestion.